

REMARKS/ARGUMENTS

Claims 1, 5 and 13-16 remain pending. Claims 17-26 were added.

Claims 3, 6-7 and 9-10 and 14-16 were cancelled by this response.

Claim 1 was amended to better clarify the scope of the invention. No new matter has been added.

Rejections Under 35 USC 102(b)

Claims 1, 7, 9, 10, 13, 15 and 16 were rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,663,520 to Ladika (hereinafter “the ‘520 Ladika Patent”). Claims 7, 9-10, 15 and 16 were cancelled. The ‘520 Ladika Patent discloses a plurality of sandwich structures. Regarding the material used in the ‘520 Ladika patent, Ladika discloses that the plates 60, 90 and 94 (constituting the external plate of a sandwich structure – cf. fig. 1 and 3) are made from a high hardness, wrought steel armor plate (cf. column 5, lines 38 to 42). Ladika further discloses that the plate 102 (constituting a medium layer between the external plate 90 made of steel and the internal plate 36 – cf. fig. 1 and 3) is made of 4130 RC 39-42 steel (cf. column 5, lines 60 and 61). Furthermore, Ladika discloses the left side reinforcing plate 48, the left side inner reinforcing plate 50 and the A-pillar reinforcement 52 (constituting neither an external plate nor an internal plate of a sandwich structure) are made of aluminium (cf. column 6, lines 14, 15, 25, 26, 34 and 35). The ‘520 Ladika patent indicates as well that the outer protective plate 155 (constituting the external plate of a sandwich structure – cf. fig. 2) is made of steel (cf. column 7, line 36). Finally, the ‘520 Ladika patent indicates that the second abutment angle blocks 66 (constituting neither an external plate nor an internal plate of a sandwich structure) are made of aluminium (cf. column 8, lines 32 and 33).

Thus in the ‘520 Ladika patent, aluminium is not used in a sandwich structure. In addition, the outer plate of Ladika’s sandwich structure is obviously not made of aluminium). None of the disclosed sandwich structures correspond to the claimed one. Furthermore, in Fig. 8 of the ‘520 Ladika patent, reference numeral 114 refers to the inner plate and 60 (made of steel – cf. column 5, lines 38 to 42) to the outer one, as it can be seen in figures 1 and 3.

In contrast to the '520 Ladika patent, according to the present invention as defined by claim 1, the sandwich structure is used to protect an inner space (of a fixed or mobile installations or equipment such as land, sea or air vehicles, containers, packaging... - cf. paragraph 2) from external projectiles. Thus, the structure delimits an inner space from an external environment. The sandwich structure comprises an outer plate (i.e. a plate facing the external environment) made of a first ductile material and designed to resist first impacts of projectiles and to absorb some of the kinetic energy of the projectiles, and an inner layer (i.e., a layer facing the inner space) made of a second hard material which is harder and less ductile than said first ductile material and designed to stop the projectiles that passed through the outer plate and had lost some of their energy, and spacers designed to fix the outer plate to and at a distance from the inner layer.

Thus, in use, a projectile comes into contact with the plate made of a ductile material, and then with the layer made of hard material.

As a consequence, the '520 Ladika Patent clearly does not disclose all the elements of Claim 1.

Regarding claim 13, as previously presented, it is not anticipated since it depends from claim 1.

Rejections Under 35 USC 103(a)

Claim Rejections Under 35 USC 103(a) Over Martin in View of Ladika

Claim 1, 5 and 13 were rejected under 35 USC §103(a) over U.S. Patent 5,471,905 to Martin ("the '905 Martin Patent") in view of the '520 Ladika patent. In the '905 Ladika patent, the disclosed sandwich structure (the inner plate, the outer plate and the multi-cell core) is made of a tough titanium alloy.

Thus, in the structure disclosed by the '905 Ladika patent, the inner and outer plates are made of the same material. Furthermore, the structure does not comprise spacers designed to fix the outer plate at a distance from the inner plate but a core element extending along the entire surface of both inner and outer plates.

Contrary to the examiner statement, the present invention cannot be summarized as a mere replacement of a material (titanium alloy). On the basis of the '905 Martin Patent, among other characteristics, the invention can be characterized by a replacement of a complex structure made in a first material, by another structure having a two

different materials (and different from the first one) with different physical properties (one being ductile, the other being hard).

The arguments with respect to the '520 Ladika patent are incorporated herein by reference.

Accordingly, the present invention is not obvious over Martin in view of Ladika.

Claim Rejections Under 35 USC 103(a) Over Lanz

Claim 1, 5 and 13 were rejected under 35 USC §103(a) over EP 1182420A1 (the "EP '420 Lanz Patent"). In the EP '420 Lanz Patent, the disclosed structure comprises an inner plate, an outer plate and spacers designed to fix the outer plate to and at a distance from the inner plate. But the EP '420 Lanz Patent teaches nothing about the material used to form the inner plate. Thus it does not disclose a sandwich structure in which the inner plate and the outer plate are made of different materials.

In addition, none of the cited documents disclosed a sandwich structure having an outer plate made of a first material, and an inner plate made of a second material having physical properties different from those of the first material.

Consequently the invention defined by claim 1 is patentable. Because all other claims depend from Claim 1, those claims are patentable as well.

Conclusion

The undersigned respectfully submits that this application is in condition for allowance. Early and favorable reconsideration and allowance of this application is respectfully requested. If any outstanding issues might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call the representative of the assignee of the entire interest of this application at the telephone number shown below.

This response is filed within four months from the mailing date of the office action. Accordingly, Assignee has attached a check in the amount of \$130 for a one month extension. A petition for extension of time under 37 C.F.R. 1.136 is also hereby made.

Appl. No. 10/522,075
Amdt. dated July 1, 2010
Reply to office action of March 1, 2010

Respectfully submitted,

BURTON IP LAW GROUP

A handwritten signature in black ink, appearing to read "Daphne Burton", with a long horizontal flourish extending to the right.

Daphne L. Burton
Registration No. 45,323

2029 Century Park East
Suite 1400
Los Angeles, California 90067
Date: July 1, 2010
Direct dial: 310.867.2754
Facsimile: 310.943.1470